



Air Quality Permitting Statement of Basis

April 27, 2007

**Permit to Construct No. P-060310
and
Tier I Administrative Amendment No. T1-060311**

**Nu-West Industries, Agrium Conda Phosphate Operations
Soda Springs, ID**

Facility ID No. 029-00003

Prepared by:

Ken Hanna, Permit Writer
AIR QUALITY DIVISION

PUBLIC COMMENT DRAFT

Table of Contents

ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURES.....	3
1. PURPOSE.....	4
2. FACILITY DESCRIPTION.....	4
3. FACILITY / AREA CLASSIFICATION.....	4
4. APPLICATION SCOPE.....	4
5. PERMIT ANALYSIS.....	5
6. PERMIT FEES.....	7
7. PERMIT REVIEW.....	8
8. RECOMMENDATION.....	8

Acronyms, Units, and Chemical Nomenclatures

AIRS	Aerometric Information Retrieval System
AQCR	Air Quality Control Region
CEMS	continuous emissions monitoring system
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
EPA	U.S. Environmental Protection Agency
HAPs	Hazardous Air Pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pound per hour
MACT	Maximum Achievable Control Technology
NO _x	nitrogen oxides
MSR	New Source Review
PM	particulate matter
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
Rules	Rules for the Control of Air Pollution in Idaho
SCR	selective catalytic reduction
SIC	Standard Industrial Classification
SO ₂	sulfur dioxide
SPA	superphosphoric acid
T/yr	tons per year
UTM	Universal Transverse Mercator
VOC	volatile organic compound

1. PURPOSE

The purpose for this memorandum is to satisfy the requirements of IDAPA 58.01.01.200 and 300, Rules for the Control of Air Pollution in Idaho, for issuing permits to construct and Tier I operating permits.

2. FACILITY DESCRIPTION

The Nu-West Industries, Agrium Conda Phosphate Operations, facility (Agrium) produces multiple fertilizer based products. The facility's primary product is in a liquid fertilizer product called Super Phosphoric Acid (SPA). SPA is produced by concentrating phosphoric acid to a level of 68-72% P₂O₅. SPA accounts for approximately 47% of the facility's total production volume. SPA is sold to customers where it is then upgraded, mixed or blended with other nutrients, pesticides and or herbicides before it is applied. Other products produced at the facility include Merchant Grade Acid, Dilute Phosphoric Acid, and two Dry Granular Fertilizer Products, Monoammonium Phosphate (MAP) and Ammonium Phosphate Sulfate (APS).

3. FACILITY / AREA CLASSIFICATION

Nu-West Industries, Agrium Conda Phosphate Operations (hereafter referred to as Agrium or Nu-West) is defined as a major facility for purposes of the Title V Program in accordance with IDAPA 58.01.01.008.10, because the facility has a potential to emit (PTE) for SO₂ and NO_x of over 100 T/yr for each pollutant. Nu-West is also defined as a designated facility in accordance with IDAPA 58.01.01.006 and 58.01.01.205 [40 CFR 52.21(a)] (sulfuric acid plant). For purposes of the PSD Program, the Nu-West facility is classified as a "major stationary source" per IDAPA 58.01.01.205 [40 CFR 52.21b(1)] since it has the potential to emit over 100 T/yr of two regulated NSR pollutants (SO₂ and NO_x) and it is on the list of designated facilities. The AIRS classification is "A" because the facility has the PTE of over 100 T/yr of a regulated air pollutant. The SIC code for this facility is 2874 which is defined as a phosphate fertilizer production plant.

The Nu-West facility is located within AQCR 61 and UTM Zone 12. The facility is located in Caribou County, which is designated as attainment or unclassifiable for all criteria air pollutants (SO₂, NO_x, CO, PM₁₀, ozone and lead). The AIRS facility classification is not changed as a result of this PTC.

4. APPLICATION SCOPE

This permit modification addresses the following requested changes:

- The requirements of 40 CFR Part 63, Subparts AA and BB may not apply to the Agrium facility because it is not a major source as defined in Section 63.2. Therefore, these requirements should be removed from the PTC and Tier I permits. On March 26, 2007, the request to review MACT applicability to the facility was withdrawn.
- It is requested that PTC condition 3.6.1 and Tier I condition 6.8.1 requiring catalytic control equipment for the SPA Oxidation process emissions be deleted. Actual monitoring data obtained using the required NO_x monitor (Horiba CEMS) has shown that actual emissions from this source are much less than the design estimates used for the PTC and, therefore, use of this control device is not necessary to meet the emissions limit for this source.
- Incorporate revisions to requirements for the Granulation Plant as set forth in PTC No. P-060324

4.1 **Application Chronology**

May 30, 2006	PTC application was received
June 29, 2006	Application incompleteness letter was issued
July 24, 2006	Additional application information was received
March 26, 2007	Agrium withdrew the request to review applicability of MACT, 40 CFR 63 Subparts AA and BB, for the facility
April 26, 2006	A draft permit was provided to Agrium for review
April 26, 2006	Comments on the draft permit were received from Agrium

5. **PERMIT ANALYSIS**

This section of the Statement of Basis describes the regulatory requirements for this PTC action.:

5.1 **Equipment Listing**

No new equipment is added to the facility, however, the requirement to install and operate a selective catalytic oxidation system to control NO_x emissions from the SPA oxidation system is removed from the permit as a result of this permit modification. The emission estimates used for the Sustaining/Expansion PTC, PTC No. 020-00003 issued July 12, 2000, relied on very conservative pre-construction emission estimates for the SPA oxidation process. Actual emissions after the new systems were constructed were found to be far below the initial estimates such that it is not necessary to operate the SCR at all in order to meet the 5 ton/yr NO_x emissions limit for the SPA oxidation system. Refer to the emissions inventory section below for additional information.

5.2 **Emissions Inventory**

PTC permit condition 3.3 (Tier I condition 6.3) limits the emissions of NO_x from the SPA oxidation process to 5 tons/yr or less. This limit is not changed by this permit revision. Therefore, the NO_x potential to emit (PTE) for the SPA oxidation process is 5 tons/yr both before and after issuance of this PTC.

5.3 **Modeling**

Modeling is not required for this PTC because there is no increase in allowable emissions.

5.4 **Regulatory Review**

This section describes the regulatory analysis of the applicable air quality rules with respect to this PTC.

IDAPA 58.01.01.201.....Permit to Construct Required

A PTC was requested by Agrium to change the operating requirements. In particular, it was requested that PTC condition 3.6.1 in PTC No. P-040320, issued on April 28, 2006, be deleted. It is necessary to issue a PTC revision in order to make this change.

IDAPA 58.01.01.203.....Permit Requirements for New and Modified Stationary Sources

The applicant has shown to the satisfaction of DEQ that the facility will comply with all applicable emissions standards, ambient air quality standards, and toxic increments.

IDAPA 58.01.01.205.....Permit Requirements for New Major Facilities or Major Modifications in Attainment or Unclassifiable Areas

Since the Agrium is classified as a major facility under the PSD program, a determination must be made for each modification at Agrium to show whether or not the modification would be a significant modification. Normally, the process given by 52.21(a)(2)(iv) would be used. However, in this case, since the total allowable emissions of NO_x (i.e., 5 tons/yr) from the SPA oxidation process, both before and after this modification, would be less than the NO_x “significant” emission rate (i.e., 40 tons/yr), as defined by 52.21(b)(23), then it is not possible for an increase to occur which would exceed the significant emission rate. Therefore, this project would not result in a significant modification.

IDAPA 58.01.01.209.05.c, 381Permit to Construct Procedures for Tier I Sources

This PTC modification is for a Tier I source, therefore, the PTC must be processed according to the procedures for a Tier I source. In particular, this PTC and Tier I revision will be processed according to Section 209.05.c as requested by the facility. The draft PTC will meet both PTC and Tier I requirements including public comment, affected state and tribal review per Sections 209, 364, and 365. The proposed PTC will also be sent to EPA for review, concurrently with the 30-day comment period, per Sections 209.05.c and 366.

The permittee may at any time after issuance of the PTC, request that the PTC requirements be incorporated into the Tier I operating permit through an administrative amendment in accordance with Section 381. It is noted that Agrium has already made this request in the letter from Agrium to DEQ that was received on May 30, 2006.

IDAPA 58.01.01.224.....Permit to Construct Application Fee

The applicant satisfied the PTC application fee requirement by submitting a fee of \$1,000.00 on May 30, 2006.

IDAPA 58.01.01.225.....Permit to Construct Processing Fee

The total increase in allowable emissions resulting from this PTC is zero, and no engineering analysis was necessary; therefore, the associated processing fee is \$250.00. No permit to construct can be issued without first paying the required processing fee.

5.5 Permit Conditions Review

This section describes only those permit conditions that have been revised, modified or deleted as a result of this permit action. All other permit conditions remain unchanged.

Permit Condition 3.6.1 of PTC No. P-060320 issued April 28, 2006, and Permit Condition 6.8.1 of Tier I Operating Permit No. T1-040321 issued on April 28, 2006

This permit condition, that specified “the permittee shall install, maintain and operate catalytic control equipment to control emissions of NO_x from the Superphosphoric Acid Oxidation Process,” was removed from the permits because this equipment is not needed to meet the 5 tons/yr NO_x emissions limit for this source. It is noted that the permittee is still required to monitor this source and demonstrate compliance with the emissions rate limit using a continuous NO_x monitoring system. These monitoring requirements are set forth in PTC condition 3.6 and Tier I condition 6.8, and they remain unchanged.

PTC Conditions 2.11, 3.6.3, 3.6.5, 3.12.3, 3.13.3, and 4.10.3

The PTC record retention requirements throughout the PTC were changed from tow years to five years to be consistent with new PTC General Provision 7 and the Tier I operating permit record retention requirements.

PTC Condition 2.12 of this PTC and Permit Condition 2.12 of PTC No. P-060320 issued April 28, 2006

PTC Condition 2.12 of PTC No. P-060320 was deleted and PTC Condition 2.13 of PTC No. P-060320 was revised. In particular, the PTC requirements for a “Performance Test Protocol” and a “Performance Test Report” were changed to be consistent with the new PTC General Provisions. Modified PTC Condition 2.12 and PTC General Provision 6 now adequately address this subject.

PTC Condition 2.16 of PTC No. P-060320 issued April 28, 2006

PTC Condition 2.16 of PTC No. P-060320 was deleted because the “Certification of Documents” requirements is now set forth in PTC General Provision No. 9 of this modified PTC.

PTC Condition 3.6.3

The PTC record retention requirement was changed to allow data to be kept in electronic storage media (data historian) in addition to a “log” which is consistent with the new General Provision 7 of the PTC.

PTC Condition 4.2

PTC No. P-060324 incorporated the PM process weight limitation requirements of IDAPA 58.01.01.701 into the PTC for the Granulation Plant. In order to complete the process of incorporating and replacing PTC No. P-060324 by this new PTC, the PM process weight limitation is now being rolled into this modified PTC.

PTC Condition 4.4. and Tier I Permit Condition 2.24

PTC No. P-060324 modified and replaced Section 4 of PTC No. P-040320, issued on April 28, 2006. In particular, it added the following requirement as Condition 2.4 for the Granulation Plant granulator drum replacement project:

“To meet the requirements of IDAPA 58.01.01.205 [40 CFR 52.21(b)(33)(iv)], the replaced emission unit (i.e., the existing granulation drum that is being replaced) will be permanently barred from operation by this condition in the PTC that is enforceable as a practical matter. If the replaced emissions unit (i.e., the existing granulator drum that is being replaced) is brought back into operation, it shall constitute a “new emissions unit.”

In order to complete the process of incorporating and replacing PTC No. P-060324 by this new PTC, condition 2.4 of PTC No. P-060324 is now being rolled into this modified PTC, and will be included as Condition 2.24 in the Tier I permit.

PTC General Provisions

The existing PTC General Provisions were replaced by the most recent version of the General Provisions for the purpose of being consistent with currently issued PTCs.

6. PERMIT FEES

A PTC application fee of \$1,000.00 applies in accordance with IDAPA 58.01.01 224, and this fee was received on May 30, 2006. A PTC processing fee of \$250.00 was assessed in accordance with IDAPA 58.01.01.225 since the modification has an increase of allowable emissions of zero tons/yr and no engineering analysis was required (see Table 6.1). Since this is a major facility, Tier I fees are also applicable. As of April 19, 2007, Agrium is current with the Tier I fees.

Table 6.1 PTC PROCESSING FEE TABLE

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	0.0	0	0.0
SO ₂	0.0	0	0.0
CO	0.0	0	0.0
PM ₁₀	0.0	0	0.0
VOC	0.0	0	0.0
TAPS/HAPS	2.7	0	0.0
Total:	0.0	0	0.0
Fee Due	\$ 250.00		

7. PERMIT REVIEW

7.1 Regional Review of Draft Permit

A facility draft PTC which includes proposed modifications to the Tier I operating permit was sent to the DEQ Pocatello Regional Office on April 25, 2007 for review. A response was received immediately that no further changes were necessary.

7.2 Facility Review of Draft Permit

A facility draft PTC which includes proposed modifications to the Tier I operating permit was provided to Agrium for review via email on April 27, 2007 and comments were received back from Agrium on the same day. Minor changes were requested, including a deletion of Purified Phosphoric Acid from the facility description as one of the products produced and allowances for keeping records in electronic format in addition to “log” format.

7.3 Public Comment

In accordance with IDAPA 58.01.01.209.05(c) and 364, a 30-day comment period will be provided for the public, affected states and tribes on the draft PTC and the Tier I operating permit amendment.

IDAPA 58.01.01.008.01 defines affected states as: “All states: whose air quality may be affected by the emissions of the Tier I source and that are contiguous to Idaho; or that are within 50 miles of the Tier I source.” A review of the site location information included in the permit application indicate that the facility is located within 50 miles of the Fort Hall Indian Reservation, Wyoming and Utah. Therefore, the Shoshone-Bannock Tribes, Wyoming and Utah will be provided an opportunity to comment on the draft PTC and the Tier I operating permit amendment. The EPA will also be provided with an opportunity to comment on the proposed Tier I amendment, and this will occur concurrently with the 30-day comment period in accordance with IDAPA 58.01.01.209.05.c.iv and 366.

8. RECOMMENDATION

Based on review of application materials, and all applicable state and federal rules and regulations, staff recommend that draft PTC No. P-060310 for the modification to the SPA oxidation system be issued for public comment. The project does not involve PSD requirements.

KH/ Permit No. P-060310 and T1-060311